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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,269	11/28/2000	Simon Kasif	0918.2033-000 (P00-3373)	7893
7590	11/19/2004		EXAMINER ZEMAN, MARY K	
IP Administration Legal Department, M/S 35 Hewlett-Packard Company P.O. Box 272400 Fort Collins, CO 80527-2400			ART UNIT 1631	PAPER NUMBER

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/724,269

Applicant(s)

KASIF ET AL.

Examiner

Mary K Zeman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14, 16, 19-30 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14, 16, 19-30, 35-36 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/23/04 has been entered. The after final amendment of 6/24/04 remains unentered.

Claims 1-5, 7-14, 16, 19-30, 34-36 are pending in this application. Claims 34-36 are newly added.

Applicant's arguments filed 8/23/04 have been fully considered but they are not completely persuasive. Rejections not repeated below have been withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

Claim 34 is objected to because of the following informalities: "(b) providing at least one training sequences" should be "(b) providing at least one training sequence". Appropriate correction is required.

Rejections Maintained

Claims 1-5, 7-9, and 21-25 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are drawn to methods of manipulating data which do not produce a concrete, tangible and useful result.

Applicant's amendments and arguments have been carefully considered.

Claim 1, as amended, accesses data, compares data, forms vectors then provides the vectors for use as input to a classifier, cluster or indexer "in the desired analysis..." "to produce a respective classification, cluster or index..." Applicant argues that the data that results from this method is a concrete, tangible and useful result, in that it answers the question "Does the subject genome sequence S belong to a sequence class C?" Claim 1 is not limited to this type of

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question, in fact, it sets forth no particular set of classes, indices, or clusters. No specific analyses are set forth in the claim besides selecting from indexing, clustering and classifying. The analysis is simply "the desired analysis." Without a specific set of classes, clusters or indices, or a directed type of analysis, the data of the claim lacks significant boundaries and the results of the methods must be further interpreted, manipulated or changed to be useful to the user.

Applicant cites the fact that the data resulting from the claim in AT&T Corp. was further useful in other analyses and methods to refute the Examiner's position that the data must be immediately useful to the user. This is not persuasive, as the Court determined that the PIC value itself was a concrete, tangible and useful result in itself- its usefulness did not lie solely in its ability to be used for further methods such as billing.

In regards to claim 21, the steps of the method are essentially the same as claim 1. No particular analysis, or classification scheme, or index, or clustering are set forth. This claim is not limited to the question posed by Applicant: "Does the subject genome sequence S belong to a sequence class C?" Claim 1 is not limited to this type of question, in fact, it sets forth no particular set of classes, indices, or clusters. No specific analyses are set forth in the claim besides selecting from indexing, clustering and classifying.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7-14, 16, and 19-30 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant's arguments and the set of pending claims have been carefully considered. Applicant is reminded that this rejection is based upon 112 second paragraph, and not on written description. While the claims are read in light of the specification, limitations from the specification cannot be read into the claims. The previously identified portions of claims 1, 5,

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10, 14, 19, 20, 21 and 26 fail to specifically point out the steps or data manipulations to be performed in carrying out the claimed methods. In claim 1, it is the steps of the final seven lines which were pointed out as being indefinite by the Examiner. As set forth previously, each of indexing, classifying and clustering require differing manipulative algorithms. The fact that a multiplicity of algorithms are known in the art does not make them a limitation of the claim. It is unclear if all known algorithms produce equivalent data, and if not, the claim lacks the proper instruction as what is required.

It would appear that the method must be iterated at least once, to allow for differing classifications, clusters or indexes to exist, however, the claim is not so limited. What are the boundaries for each class, cluster or index? How are the boundaries developed, and to what degree of specificity must the analysis match the class, cluster or index in order to be included? Claims 10, 14, 19, and 20 have a similar problem with the analysis, indexing, clustering or classification features. What is the analysis? What makes up the index? What are the clusters, and how close must two values be to be considered able to be clustered together? What are the classifications and how similar must a value be to be put in a particular class? What changes in each apparatus to perform each function? Limitations from the specification cannot be read into the claim.

Claim 5 appears to be a duplicative claim, as its limitation is already present in claim 1. Applicant does not appear to have responded to this issue.

Claim 10 lacks any display or output means for the results of the comparison routine.

The limitations of claims 11 and 16 are to non-functional descriptive material stored in the data store device, and do not further limit the structure of the apparatus itself.

In claim 13, the reference to "the output of the comparison routine" lacks antecedent basis in claim 12, or 10. No data clearly identifiable as "the output" is provided.

In claim 19, 35 and 36 the metes and bounds of the terms "structural or functional class" in regards to a protein sequence are not clear, nor are they specifically defined in the specification. The Examiner does not find a specific definition of these terms, or a list of exemplary classes such that these terms allow one of skill in the art to determine how a sequence is to be classified. It is unclear how the formed uniform representations can distinguish between

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structure and function. Classification based on the presence or absence of certain motifs or fragments would appear to be a structural (sequence) analysis, not functional.

Claim 19 lacks output means for the results of the comparison routine. The apparatus only comprises a data store and some software.

Claim 26 lacks means for output.

The limitations of claim 27 and 29 are to data which is non-functional descriptive material. These limitations do not further limit the apparatus.

Conclusion

No claim is allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P Woodward can be reached on (571) 272 0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.


MARY K. ZEMAN
PRIMARY EXAMINER

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